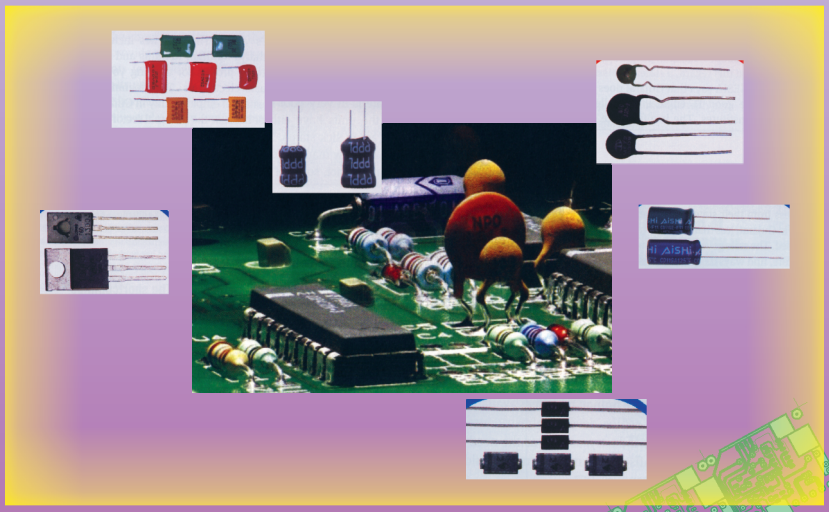
MEGA-KIT



A single pack ready to assemble electronic project kits

Detailed theoretical circuit description.
Functional block diagrams
Easy to understand circuit diagrams.
PCB component layout.
Complete component list.
Well packed components.

Dear friends,

Welcome to house of kits. **`MEGA-KIT`** *is a single point source for all your needs of electronic projects and kits.*

The enclosed list of our latest projects will give you realization that **`MEGA-KIT`** *are single pack ready to assemble project kits. Detailed theoretical circuit description , functional block diagrams, easy to understand circuit diagrams, green masked printed circuit board with component layout and idents on component side, complete component list, and neatly packed total components are the attractive features of these kits.*

`MEGA-KIT` *is backed up by highly professional, seasoned team of technocrats to guide you in case of any difficulties. We hope* **`MEGA-KIT`** *will prove the exclusive tool to understand the basic electronic concepts and increase the interest in the subject.*

Please find herewith the addresses of the main outlets of the **MEGA-KIT**

Try **`MEGA-KIT`** *and be tension free.*

Best of luck and thanking you,

for **MEGA-KIT**

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DESIGN IDEAS

CATEGORY	PROJECTS
Using logic gate ICs e.g. CD 4093, CD 4011, CD 4023,CD 4068; CD 4001, CD 4012	*016,019,020,021,024,027,029,030,031, 038,039,050,053,056,061,062,065,067, 068,069,070,071,073,078,079,089,090, 095,096,105,115,117,121.*
Using counter ICs e.g. CD 4543, CD 4510, CD 4017, CD 4518 CD 4040	*001,002,003,004,005, 007,011,015,021, 025,026,040,041,048,051,052,053,055, 061,062,066,071,095,102,104,105,106, 107,108,116,117,118*
Using OPAMP e.g. LM 358, LM 324, LM 386,OP-07	*006,009,018,028,034,045,054,057,058, 075,077,082,083,086,087,088,103,114*
Using LEDs	*022,023,024,025,027,029,031,041,042, 043,045,046,047,048,051,052,053,056, 058,061,062,065,069,070,071,072,074, 076,077,078,079,081,095,101,106,113,*
Using SCR,diac,triac	*008,049,063,064,065,*
Using light sensors e.g. LDR, TIL38/81,opto-isolators, fiber optics	*008,017,023,045,054,056,058,059,060, 074,077,079,107,122*
Using displays e.g. LT542,LT543	*001,002,003,004,005,06,007,010,011, 025,040,052,066,071,084,086,091,100 102,104,107,116,117*
Using thumbwheels	*001,02,03,030,055*
Using speaker	*073,087,112,114,119,120*
Using microphone	*075,082,083,087,098,111,114*
About time	*002,003,007,015,,038,039,*
About temperature	*006,022,057,*
About voltage	*009,010,12,017,*
About speed/frequency	*004,005,013,014,085,089,110*

MEGA-KIT DIGITAL BATCH COUNTER 001

You can use this counter to make the batches of any items. Set the item quantity of the batch with the help of thumbwheel. Input signal will be from object sensor such as proximity switches, limit switches. Counter counts down the set value to 0000. As soon as it reaches zero, the relay will trip the system to stop further counting

650=00

MEGA-KIT DIGITAL PRESET TIMER 002

This is a digital 99 second preset timer. Set required time by thumbwheel . and press `START`/ RESET` push button. Timer will start counting down . When it reaches 00 , relay will be on.

425=00

MEGA-KIT DIGITAL CYCLIC TIMER 003

The cyclic timer has two separate on and off setting by thumbwheel. Two separate digital display will indicate on and off time by down counting. Useful in automation, process control etc.

725=00

MEGA-KIT DIGITAL SPEED INDICATOR 004

This device accepts the signal from any speed sensors such as optical, magnetic, inductive proximity switches , limit switches. 4 digit display shows speed of the object in R.P.M.

1100=00

MEGA-KIT FREQUENCY INDICATOR 005

Frequency of any shaped sine, square, triangle, pulse wave form up to 1KHz can be measured on 4 digit display. Useful laboratory instrument to measure audio, video, oscillator signal.

900=00

MEGA-KIT TEMPERATURE INDICATOR 006

This temperature indicator uses`J/K` type thermocouple as a temperature sensor. Temperature range is 0-400 oC. Useful for heaters, boiling liquids, hot objects, in process control and automation.

650=00

MEGA-KIT DIGITAL STOP WATCH 007

This is digital 99 second stop watch. Pressing `START` push button will start crystal control precision clock giving1 pulse per second counted by digital display. It can be stop by `STOP` push button. Useful in sports events, athletics, industrial process control

350=00

MEGA-KIT LIGHT ACTIVATED SWITCH 008

This low cost circuit with out relay and transformer uses diac and triac to switch on the AC lamp up to 100 watt. The lamp will be on as soon as the light intensity goes low and will switch off as soon as light intensity becomes high. LDR is used here to sense the light intensity.

60=00

MEGA-KIT UNDER/OVER VOLTAGE MONITOR 009

Protect your valuable electrical gadgets , motors from damage due to variation in supply voltage. Set upper and lower voltage limit with preset. As soon as incoming voltage crosses either of the limit relay will be off to cut off the supply to prevent the damage.

250=00

MEGA-KIT DIGITAL VOLT METER 010

3 ½ digit panel meter uses LSI 7107 A/D converter IC. The display indicates DC voltage from 200mV to 200V.

250=00

MEGA-KIT DIGITAL CAPACITOR METER 011

Two digit digital capacitance meter measures capacitance of electrolytic, tantalum, polyester, ceramic capacitor in three ranges 0-10uf / 0-100uf / 0-1000 uF.

450=00

MEGA-KIT BATTERY DRAIN INDICATOR 012

This tiny 10 LEDs bar display indicates status of the battery voltage in graphical form. Three different color LED s shows low (drain), normal and high (over charge) voltage zone of the battery.

120=00

MEGA-KIT LOW SPEED ALARM 013

Controls the speed of the electric motor or any moving mechanism such as conveyors. The speed may reduce due to overload, uneven load, single phasing, low voltage. Under speed alarm will give audio-visual alarm as soon as speed reduces to set value.

485=00

MEGA-KIT EVENT FAILURE ALARM 014

Watch out the time required for two consecutive operations. If it stretches beyond limit or speed of the operation reduces, this unit will alert you and trip the system also.

340=00

MEGA-KIT SEQUENTIAL TIMER 015

Switches on and off nine different loads sequentially with set time. Useful for periodical data collection, single indicator having multiple inputs, running light having different effects, time base logic control.

500=00

MEGA-KIT WATER LEVEL CONTROLLER 016

Switches on the pump when water level in the upper tank goes below lower probe and switches off the pump as soon as water level reaches upper probe . It also switches off the pump if water in the lower tank goes lower level of the lower tank probe, there by preventing the pump from dry running.

135=00

MEGA-KIT SINGLE PHASE PREVENTOR 017

Unit stops three phase motor from running if one of the phase out of three is absent due to loose contact, open circuit, low voltage due to over load or unbalance load

350=00

MEGA-KIT METAL DETECTOR 018

Metal detector locates metallic objects especially M.S. buried under the ground , embedded in the walls , or hidden in the cloths. When metal comes in close proximity of the search coil , buzzer will sound as well as LED will light up to give audio-visual indication.

150=00

MEGA-KIT SECRET CODE LOCK 019

In this four digit secret code lock relay will be on only when you enter correct 4 digit number by key pad. Relay will be off by reset push button You can operate AC/DC solenoid plunger through contacts of the relay to open or close the door, safe or locker.

350=00

MEGA-KIT BURGLAR ALARM 020

Burglar alarm is a protective device to prevent robbery. It gives audio visual alarm as soon as some body tries to open the door, shutter, windows, lockers, cupboards forcefully.

275=00

MEGA-KIT SECURITY ALERT SYSTEM 021

This interesting gadget keeps watch on the security watchman on duty especially at nigh. Watchman on the duty has to register his hourly attendance on this unit. The row of 10 LEDs will show the failure if any so that you can catch the defaulted security.

1200=00

MEGA-KIT ELECTRONIC THERMOMETER 022

Handy indicator shows temperature in bar/dot graph giving effect of thermometer. LM35 is used as a temperature sensor. Wide temperature range can be selected.

200=00

MEGA-KIT LUX METER 023

This little unit measures light intensity Photo transistor is used as sensor. Dot/bar graph gives intensity in Lux. Useful in photography, controlling environment conditions, measurement of fog density, flame monitoring, dust measurement etc.

150=00

MEGA-KIT TRAFFIC SIGNAL SYSTEM 024

Conventional traffic signal system operating in city square . Four lamp posts each having three indicators inform of LEDs , red LED for `STOP` , green LED for `GO` and yellow for `ALERT` to stop.

250=00

MEGA-KIT DIGITAL TRAFFIC SIGNAL 025

This is most sophisticated traffic control system having digital indication for both go and stop time. The indicator counts down for two separate values set by thumbwheel one for stop and other for go time. conventional red LED for stop and green for go are provided.

450=00

MEGA-KIT MULTI CHANNEL SWITCH 026

With the help of single switch you can switch on and off nine different power points or equipments in sequence. You may use this for any sequential process operation by using various permutation and combinations of output relay contacts.

550=00

MEGA-KIT ALARM ANNUNCIATOR 027

Five channel alarm annunciator is a essential part of the control panel in any process industries such as chemical ,pharmaceutical, food, cement, sugar. It gives audio visual indication of any fault in the plant. Accept and reset facility is provided.

270=00

MEGA-KIT INDUCTIVE LOCK 028

All to gather different lock uses high frequency oscillator having inductive coil as a key. The lock accept the signal from this coil key to switch on relay to de actuate the solenoid plunger.

190=00

MEGA-KIT OFFICE / HOTEL CALL BELL 029

One attendant can attend number of cabins / rooms. The main panel gives audio visual indication of the person calling. Useful for offices, hotels, hospitals. the system has got accept and reset facility.

325=00

MEGA-KIT THUMBWHEEL LOCK 030

Unique relay operated plunger lock system which opens with one two digit code number and close with another two digit code number. The code is to be enter by two thumbwheels.

150=00

MEGA-KIT QUIZ MASTER 031

This is a useful tool in quiz games. This master can be used for maximum six participants. Candidate who know answer has to press push button mounted in front of him. This gives audio signal in form of buzzer as well as visual indication in form of LED or lamp. At the same time pressing P.B. by other candidate will be in effective.

750=00

MEGA-KIT REGULATED POWER SUPPLY 032

This 0-30 VDC 1 A regulated power supply is a must instrument in anybody`s electronic laboratories. Single chip regulator IC LM 350 K is used. It gives regulated output voltage from 1.5V to 30V at 1 A.

280=00

MEGA-KIT TRANSISTOR TESTER 033

This little gadget identifies unknown transistor whether PNP or NPN with correct pin configuration, base, collector, emitter.

30=00

MEGA-KIT LOGIC PROBE 034

This little handy tool gives quick look at logic states in digital logic circuit. TTL/CMOS options are provided. Logic high, low intermittent are shown by different LEDs. Also indicates presence of pulses.

80=00

MEGA-KIT PULSE GENERATOR 035

Simple pulse generator using IC 4093 quad NAND gates. Wide range of frequency can be selected from 1 Hz to MHZ. Duty cycle i.e. on and off time can be separately by two presets.

400=00

MEGA-KIT FUNCTION GENERATOR 036

The function generator uses commonly available NE 555 timer IC. It provides simultaneous output of sine, square, and triangular wave at three different points in the circuit. Wide frequency range is available.

250=00

MEGA-KIT AUDIO SIGNALGENERATOR 037

This generator gives pure sine wave in three frequency ranges 300Hz, 3KHz, and 30KHz. Output voltage level can be adjusted from 0 to1 V rms. Circuit is build around IC TDA 2006 normally used as audio power amplifier IC.

300=00

MEGA-KIT UNIVERSAL TIMER 038

The circuit uses IC CD 4093quad NAND gate. The time range can be selected from micro seconds to few hundred seconds. Three options on delay, off delay, cyclic mode are available. Two separate presets are provided to set on and off time.

190=00

MEGA-KIT SINGLE CYCLE TIMER 039

This timer works only for one cycle. When `START` P.B. is pressed, cycle will start. Relay will on/off to set time the it will switch over for other set time during which you can not restart or reset the timer. After completion of the cycle timer is ready for next operation.

200=00

MEGA-KIT DIGITAL COUNTER 040

This 4 digit counter takes input from proximity switches, limit switches, reed switches etc. It counts upward up to 9999. Useful for revolution counting , job counting , length measurement etc.

700=00

MEGA-KIT DIGITAL LED CLOCK 041

Using simple CMOS IC`s you can make this clock which appears like conventional mechanical clock. 60LEDs for minutes and 12 for hours placed in circular fashion. Single LED at the center to indicate seconds. Precision crystal clock is used.

700=00

MEGA-KIT FLASHING LEDS 042

Simple two transistor a stable multi vibrator drives 4 each red and green LEDs alternatively to give blinking effect.

30=00

MEGA-KIT RUNNING LEDS 043

This amazing circuit gives three different running light effects, continuos in forward or reverse direction, stop and run effect, periodical change in forward and reverse direction.

300=00

MEGA-KIT CABLE TESTER 044

This tiny jig gives instant testing report of any multi core cable. Five LED panel shows open core as well as short between two cores. Three core cable can be tested at a time.

90=00

MEGA-KIT IR REMOTE SWITCH 045

Infra red remote switch uses IR beam to switch on or off the equipments through relay from 3-4 meter. TIL38/81 transmitter / receiver pair is used. The signal is frequency modulated to avoid the effect of day light or any other light source.

300=00

MEGA-KIT LED FLASHERS 046

The combination of various flashing methods displays variety of flashing LEDs. Blinking, slow on fast off, rapid on slow off, revolving effect, clock wise anti clock wise revolving are few of them demonstrated in this circuit by connecting LEDs in different fashion.

110=00

MEGA-KIT LED DICE 047

Use this 6 LED dice to play games like snake and ladder, businessman (naya vyapari), at home etc. Pressing P.B. all 6 LEDs will appear like on as they run at very high speed. After releasing the button one out of 6 will light to show what number has to make move.

75=00

MEGA-KIT LUCKY NUMBER 048

Test your luck with this single digit gamble. Set your lucky number on thumb wheel and press `START` P.B. 10 LEDs will start running with high speed. As you release the button one out of 10 will light up and if it coincident with your selected number `WIN` LED will light.

425=00

MEGA-KIT LIGHT DIMMER 049

230VAC operated dimmer is useful for controlling light intensity of incandescent lamp up to 100 W or speed control of the fan. Diac and triac combination with angle control circuit is used.

70=00

MEGA-KIT ELECTION VOTING MACHINE 050

This election voting machine can be used for five candidates. `SET` machine facility is provided to avoid double voting. The result can be displayed on individual digital counters.

200=00

MEGA-KIT PEACOCK FEATHER LED LIGHT 051

Peacock feather spreading and closing effect is achieved in this circuit by placing 5 rows of 7 LEDs in half circular fashion. The circuit operates in last in first out mode.

300=00

MEGA-KIT DIGITAL DICE 052

Apart from the LED dice, this project has got the feature of single digit indicator. This makes playing games like snakes and ladder, at home, businessman (naya vyapari) more interesting

110=00

MEGA-KIT MOVING LED DISPLAY 053

This sign board welcomes your guests with attractive moving LED display. Letters from the word`WEL-COME` lights up one by one, remains on for a while when all the letters light up and then vanishes. In this cycle repeats. The cycle time can be set.

450=00

MEGA-KIT AUTO FLUSH VALVE 054

This is a water saving system to be fitted in urinal to control the flow of water. The unit detects the entry and presence of the man in front of urinal and after exit of that man the valve opens for fix time to control the flow of water.

225=00

MEGA-KIT TOKEN INDICATOR(T//W) 055

This digital indicator displays 3 digit token number. The number can be set with 3 BCD thumb wheels. After entering the number in the thumb wheel press the `SET`P.B.to display the set number.

900=00

MEGA-KIT LED REMOTE SWITCH 056

Using white LED or torch you can switch on or off relay remotely from 2-3 meter. LDR is used as a light sensing element. A sharp blink of LED switches on the relay and slightly longer duration blink will switch off the relay.

175=00

MEGA-KIT TEMPERATURE CONTROLLER 057

LM35 is used as a temperature sensor in this controller. Two set points are provided which can be set with the help of trimpot. Normally on relay will be off as temperature reaches upper set point and will be on when the temperature drops down to lower set point.

600=00

MEGA-KIT SUN FLOWER 058

This attractive show piece gives effect of blossoming of sun-flower as sun rises , proceeds and sets. LDR is used to sense day light intensity. The four circles of LED`s starts illuminating one by one in morning and starts vanishing in the after noon.

190=00

MEGA-KIT STREET LIGHT CONTROLLER 059

This street light controller switches on lights as the sun sets and dark and switches off the light when sun rises. Here photo transistor is used as a light sensing device.

90=00

MEGA-KIT SMOKE DETECTOR 060

Opto isolator kept in a closed housing detects change in light intensity due to smoke and gives thyristor output to actuate the relay. `RESET` facility is provided.

110=00

MEGA-KIT ELECTRONIC GAME-JACK-POT 061

Try your gambling luck here. 3 columns of 10 LEDs runs simultaneously with different speeds when you press the push button. After releasing the push button if 3 LEDs from each column comes in the same row, you will get points associated with that particular row. Maximum 100 points will be a jack pot.

390=00

MEGA-KIT SHOOT AT SIGHT 062

Show your concentration and quick response here. Set the target out of 10 high speed running LEDs. Hit it when called by second row of 10 LEDs. There is more exiting option of random target. Here second row may call any moment to hit and you must be alert to respond.

330=00

MEGA-KIT ELECTRONIC GAME-PATIENCE 063

This game will test your patience. A probe has to travel from `START` point up to `END` point with out lifting it from track as well as touching the side by track

110=00

MEGA-KIT AC FLASHING LAMP 064

This operation theater AC lamp flashes at the rate of 1 pulse per second. It directly operates from 23 VAC. Transistorized a stable multi vibrator with SCR power circuit is used.

70=00

MEGA-KIT STAR-DOT 065

Amazing school time game of star and dot to be played by two players one for star and other for dot. Game of nine squares, who first captures three in row, column or diagonally will won the game.

650=00

MEGA-KIT TOKEN INDICATOR(KEY PAD) 066

This is a sophisticated two digit token indicator . It uses two key pads for two digits to enter the number. By pressing the key pad the digit advances by one number.

250=00

MEGA-KIT TOUCH SWITCH 067

Make this simple touch switch by using single CD 4093 quad NAND gate IC. Two separate touch plates are use one to switch on the relay and another to switch off.

70=00

MEGA-KIT MAGNETIC SWITCH 068

Relay in this magnetic lock can be operated by magnet. Bringing magnet in close proximity of two reed switches placed apart will switch on and off the relay through which plunger can be operated.

85=00

MEGA-KIT MINE SWEEPER 069

Game of guessing. You have to spot mine hide in 9 squares in minimum attempts. You may call this game as police and thief. As soon as you spot, the `WIN` LED will light up.

340=00

MEGA-KIT JEWEL THIEF 070

Ancient game of police and thief is formatted here as a `JEWEL THIEF` . Two players ,a police and a thief can play this game. Thief has to pick up jewel in form of LED and police has to caught him quickly before he escape. So this is the game of quick reflections.

190=00

MEGA-KIT DIGITAL MATHEMATICAL TABLE 071

Learn mathematics with fun . Set the table you want from 1 to 9 by thumbwheel and press `START` P.B. 2 digit display will automatically start showing selected table one by one and stop when it finishes the last digit.

450=00

MEGA-KIT ELECTRONIC GAME-CRICKET 072

Now you can play cricket by electronics. To be played between two players, a bowler and a batsman. 10 LEDs with all permutation and combinations show runs made and wickets gone.

300=00

MEGA-KIT SIREN 073

This simple circuit using NAND gate IC CD 4093 and MOS FET drives directly loud speaker. Very useful in any type of alarm system.

90=00

MEGA-KIT FIBER ALARM 074

This is a security fencing arrangement. As soon as closed fiber loop is broken by any means you will get audio-visual indication.

150=00

MEGA-KIT SOUND (DB) METER 075

You can measure the sound level in decibel of any amplifier or music system. Range from -21 to +6 db can be seen on bar/dot graph.

250=00

MEGA-KIT STRENGTH INDICATOR 076

Check your muscle power by pressing your thumb on piezo element. More the impact pressure you give on the surface of piezo more LED s will light up on dot/bar gragh.

150=00

MEGA-KIT IR SECURITY ALARM 077

Infra red security alarm uses TIL38/81 infrared LED and photo transistor as transmitter and receiver. As soon as any body interrupts transmitted signal relay will be switch on. This can be used as a sensor to count number of persons entering the gate or security purpose.

250=00

MEGA-KIT LED DIRECTION INDICATOR 078

This attractive LED lighting arrays can be used as a direction indicator. Single IC CD 4093 quad NAND gates is used.

90=00

MEGA-KIT OPTICAL LOCK 079

The optical lock uses combination of LEDs as a key and combination of LDR as a lock. With the help of two separate push buttons for `OPEN` and `CLOSE` . With various combinations of four white LEDs you can activate /deactivate relay to operate solenoid plunger.

125=00

MEGA-KIT MAGIC LOCK 080

Based on principle of resonance circuit of two oscillators. One acts as a key and another as a lock. As soon as you brought key oscillator in proximity of the lock oscillator relay will be actuated.

150=00

MEGA-KIT TENSION INDICATOR 081

You may call this bio medical equipment as a lie detector also. This device measures the change in the skin resistance with respect to change in the emotional state.

150=00

MEGA-KIT BLOW SWITCH 082

This simple circuit can be used as a secret switch for security. Switch opens and closes by puffing out in front of microphone.

150=00

MEGA-KIT ELECTRONIC LANTERN 083

Can you imagine electric lamp lights up with match box stick and switches off by blowing. This is the circuit where you can do so as we do in old kerosine lantern or wax candle.

100=00

MEGA-KIT CAPACITANCE METER 084

This capacitance meter gives direct reading of unknown capacitor on 2VDC DPM/DMM , in six decade ranges from 1kpf to 100uf.

135=00

MEGA-KIT FREQUENCY METER 085

This frequency meter converts frequency into proportionate DC voltage to read directly on 2VDC DPM / DMM. You can measure sine/ square wave frequency from 100Hz. to 1MHz in 5 ranges.

180=00

MEGA-KIT WEIGHT INDICATOR 086

Load cell based on principle of strain gauge in bridge configuration is used here. 2VDC DPM/DMM directly indicates weight in Kg.

750=00

MEGA-KIT HEARING AIDS 087

This is a low cost condenser micro phone amplifier which gives clear and loud sound output . Useful for those who are hard of hearing

90=00

MEGA-KIT PACKING MACHINE CONTROLLER 088

This is a weight indicator with preset facility of the weight to actuate relay so that flow of solid or liquid can be stopped or controlled through electromagnetic solenoid valves.

MEGA-KIT DC MOTOR SPEED CONTROLLER 089

Based on PWM principle having separate adjustment facility for on and off time , this controller is useful for mini DC motors having load current up to 500 mA. Two motors can be driven.

150=00

MEGA-KIT LUGGAGE LIFT PROGRAMMER 090

Designed for 5 storage building or workshop. Ideally useful luggage carrier lift. AC/DC motor with forward / reverse facility can be driven by this circuit. Position sensors with indicators, calling push buttons with indicators and hold facility are provided.

MEGA-KIT DIGITAL SCALE 091

Using LVDT as a movement detector this device gives direct reading of the distance between two points .

600=00

MEGA-KIT LIQUID LEVEL INDICATOR 092

Magnetic float is used a level sensor. Reed and magnet type sensor gives audio visual indication as soon as liquid reaches the level

225=00

MEGA-KIT NI-CD BATTERY CHARGER 093

This Ni-cd battery charger has got unique feature that you can charge any type ans size of the Ni-cd batteries by selecting proper voltage and current by selector switch.

MEGA-KIT DC POWER SUPPLY 094

This power supply gives fixed DC regulated output by using 3 pin IC regulator 78XX . We can get 05/09/12/15/24 VDC with maximum current rating of 1 Amp.

90=00

MEGA-KIT TOSS - HEAD OR TAIL 095

This is an entertaining game of head or tail. One out of two LEDs will light up when you release the push button. Very useful in out door as well as indoor game to decide who will call /play first.

100=00

MEGA-KIT DIGITAL LOCK 096

In this lock you can enter two separate two digit code number to open and close the lock with the help of key pad.

190=00

MEGA-KIT BATTERY ELIMINATOR 097

Regulated power supply using zener diode for regulation. Can be used for any voltage and current using zener diode, transformer, and filter capacitor of appropriate value.

50=00

MEGA-KIT A.M. TRANSMITTER 098

This is a medium power A. M. transmitter having 100-150 mW RF power. It can delivers up to the range of 5-10 meters

MEGA-KIT LEAD ACID BATTERY CHARGER 099

This particular lead acid battery charger is designed for 12V7Ah lead acid battery. The circuit can be alter for any other voltand Ah rating of lead acid battery.

MEGA-KIT ELECTRONIC DICE 100

This attractive dice circuit select 1 to 6 numbers at random and indicated by 7 LEDs arranged in dice form.

200=00

MEGA-KIT MATCHING PAIR(A&B) 101

Not only game but increases the basic knowledge in electronics. Four different categories gates and symbols, resistor color code , transistors and symbols, and different components and symbols with two different optional boards A and B are available.

150=00

MEGA-KIT MIND READER 102

This is interesting game to be played between two. One has to assume 2 digit number and specify the existence of that number in 8 given tables. By entering the table number in 8 DIP switch , 2digit display will directly indicate the figure in your mind

280=00

MEGA-KIT CAPACITIVE SWITCH 103

Capacitive switch senses any dielectric material such as wood, glass, plastic, rubber, all granule, all liquids, and all metals.

180=00

MEGA-KIT PRESET COUNTER 104

This is a 2 digit down counter. The setting can be done by two push buttons. reset facility is provided to restart the counter. Input can be any limit /micro / proximity switch

MEGA-KIT 3 DIGIT MULTI CHANNEL LOCK 105

3 digit multi channel lock operates 3different equipments with 3 different 3 digit code numbers that can be enter by 3 push buttons.

400=00

MEGA-KIT PENDULUM 106

In this circuit 1 LEDs are arrange in half circular manner that gives very attractive effect of pendulum as they moves to and fro.

150=00

MEGA-KIT BAR CODE READER 107

Bar code is a representation of binary number in space and bar format. It is detected by four optical sensors to indicate single digit number.

400=00

MEGA-KIT LONG DURATION TIMER 108

This long duration timer is off delay timer having time interval in hours. 12 outputs , each successive output give double time interval so you can select from seconds to hours

150=00

MEGA-KIT DUAL POWER SUPPLY 109

This simple dual +/- DC regulated power supply designed by using commonly available LM78XX +VE voltage regulator and 79XX -VE voltage regulator

110=00

MEGA-KIT SPEEDOMETER USING DPM 110

This circuit is based on LM2917N frequency to voltage converter IC. This IC uses a charge pump technique to give frequency proportionate voltage output which can be indicated by 2VDC DPM/DMM.

260=00

MEGA-KIT F.M.TRANSMITTER 111

F.M. transmitter transmit your voice signal using high frequency carrier in frequency modulation mode up to maximum range of 100 m.

MEGA-KIT F.M.RECEIVER 112

You can enjoy the programs from your local F.M. radio stations or voice signals transmitted by your F.M. transmitter.

MEGA-KIT FUN WITH ALPHABETS 113

Ask your friend to choose any alphabet from A to Z and ask table number which contains it. By pressing that number , display will show the alphabet chosen by your friend.

430=00

MEGA-KIT INTERCOM 114

A low cost two way intercom circuit with ring tone. Ring tone is generated by a stable multi vibrator of NE555 timer IC. High performance , low wattage condenser microphone amplifier used for audio.

290=00

MEGA-KIT DIRECTION SENSOR 115

Direction of the moving object whether object is moving forward / reverse, left/ right , clockwise/ anticlockwise is sensed by using three position sensors.

180=00

MEGA-KIT COLOR CODE IDENTIFIER 116

Get the direct digital reading on the display of the resistance value by entering the colors of the 4 band color code of carbon or carbon film resistors.

MEGA-KIT MINI VOTING MACHINE 117

This mini voting machine can be cascaded to get it for voting of any number of candidates. After completion of the voting a single counter can be used for counting of the votes.

MEGA-KIT DIGITAL VOLUME CONTROL 118

Digitally variable resistance. Two push buttons are provided to increase or decrease the resistance value in steps. The variation can be in 10 equal steps of the maximum resistance value. Useful as volume control or variable potentiometer.

MEGA-KIT MUSICAL DOOR BELL 119

10 different melody tunes in sequence with adjustment of tone and tempo of the tune is provided with volume control.

MEGA-KIT ELECTRONIC ORGAN 120

Key pad operated electronic organ has the facility of tone control, peach adjustment and volume control .

MEGA-KIT BANK LOCKER LOCK 121

Bank locker lock opens with two keys one from the customer and other from the bank.This lock also needs two keys to open it.

150=00

MEGA-KIT AUTO TAP 122

Water tap automatically opens as soon as you brought your hands nearby the tap and closes as soon as you remove your hands. Infra red transmitter and photo transistors are used to sense the hands.

MEGA-KIT TRUTH TABLE OF GATES 123

This circuit will give you truth tables of various gates used in electronic circuits such as buffer, NOT, AND, NAND, OR, NOR, EX-OR, EX-NOR . Swiths are used to enter status of the input 0 or 1.

MEGA-KIT VIBRATION SENSOR 124

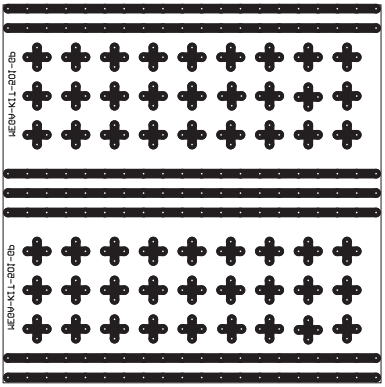
Vibration sensor senses the amplitude of the vibration and gives the average value of the vibrations in terms of voltage that can be directly read on DPM or DMM.

MEGA-KIT WIRE LESS POWER TRANSMISSION 125

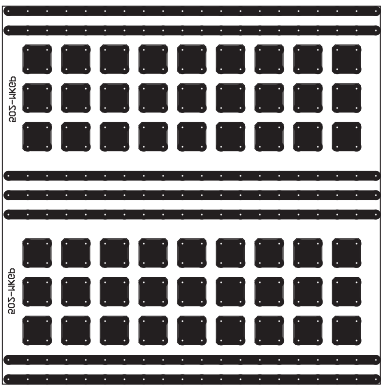
High frequency high voltage oscillator with coil winded in ferrite pot core produces strong electromagnetic field which induces the e.m.f. in the second coil which further rectifies to give DC output.

Prices indicated are without transformer / dc power supply/ battery

GENERAL PURPOSE P.C.B.S

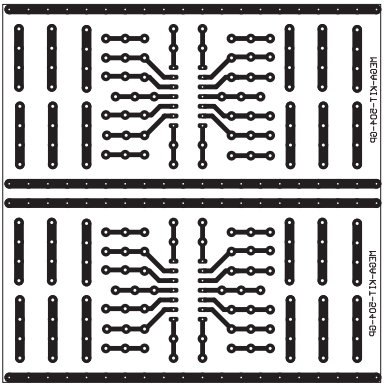


MK-GP-501

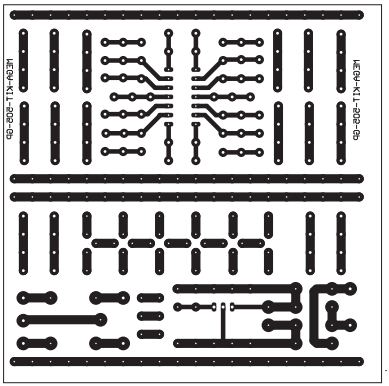


MK-GP-502

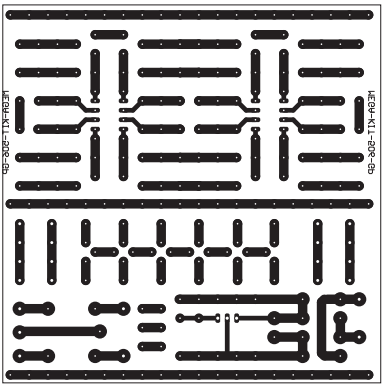
MK-GP-503



MK-GP-504



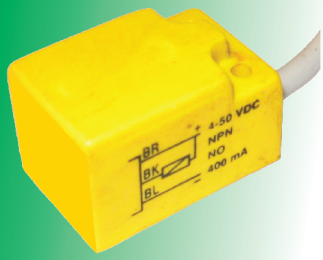
MK-GP-505



MK-GP-506

ACCESSORIES

MK-601

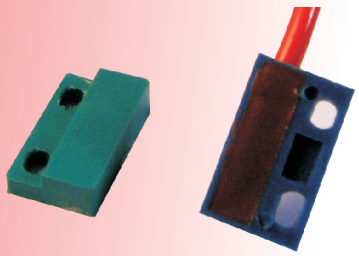


INDUCTIVE SENSOR

MK-602

CAPACITIVE SENSOR

MK-603



MAGNETIC SENSOR

MK-604

OPTICAL SENSOR

MK-605

MAGNETIC FLOAT

MK-606

WATER LEVEL SENSOR

NEW ATTRACTIONS

Micro controller based project kits :

** 301 - Hotel call bell system.*

** 302 - Puzzle O and X .*

** 303 - Elevator programmer.*

** 304 - Alarm annunciator.*

** 305 - Sequential timer.*

** 306 - Security system.*

** 307 - Universal timer.*

** 308 - Voting machine.*

** 309 - Rolling display.*

** 310 - Digital temperature controller .*

** 311 - Traffic signal system.*

**312 - Digital calender- clock*

** 313 - Pre set table weighing scale.*

** 314 - Energy monitor.*

** 315 - Universal counter.*

When purchasing `MEGA-KIT`

Please check whether it contains :

* *Clean, clear and detailed circuit diagram.*
* *Component list giving specifications of components with corresponding idents and total quantity required.*
* *Circuit description explaining function of the circuit in detail step by step with functional block diagram if necessary.*
* *Tin plated green masked printed circuit board with clear and visible idents.*
* *Well packed components in plastic bag , strictly as per specifications and quantity mentioned in part list.*

When assembling `MEGA-KIT`

Use the components from the kit only. Do not replace it.

Use temperature controlled soldering gun for soldering.

Use IC sockets for ICs.

Start from passive components of least height, e.g. first resistors, then IC sockets then capacitors etc.

Insert ICs after completion of total assembly.

Clean the P.C.B. with PCB cleaning solution before testing.

Check the assembly as per circuit diagram before testing.

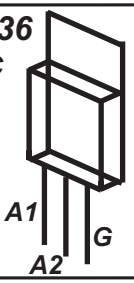
Check the assembly for dry solder or short circuit.

PIN OUTS

BC 547
NPN TRAN SISTOR

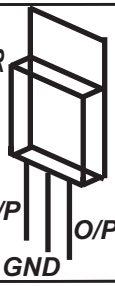
BC 557
PNP TRAN SISTOR

BT 136
TRIAC

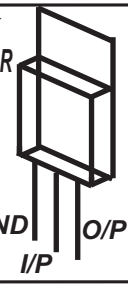


BT 169
SCR

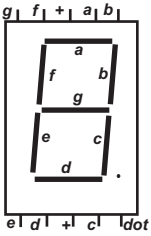
78xx
REGULATOR



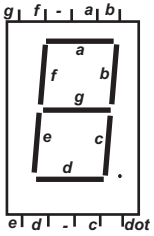
79xx
REGULATOR



LT-542



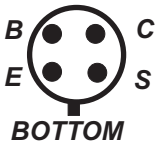
LT-543



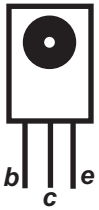
LM 35
TEMP SENSOR

BS 170
N -CH MOSFET

BF 200



BT139/140



FORMULAS AND UNITS

Potential difference	Volt(V)	Resistance	Ohms
Current	Ampere(A)	Capacitance	Farad
Power	Watts(W)	Inductance	Henry

Resistance R = Voltage(V) / Current(I)

Power W = V x I x Cos ϕ (Power factor)

Frequency f = 1/T(time)

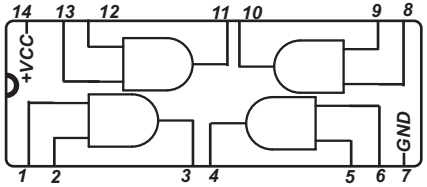
Frequency of 555 a stable multi vibrator:

$$f = \frac{1.44}{(R1+2R2)C1}$$

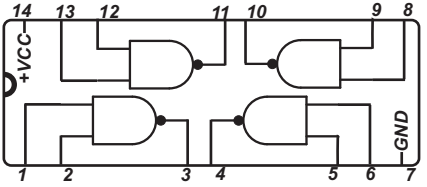
10^{-3}	Mili
10^{-6}	Micro
10^{-9}	Nano
10^{-12}	Pico
10^{3}	Kilo
10^{6}	Mega

CMOS ICS

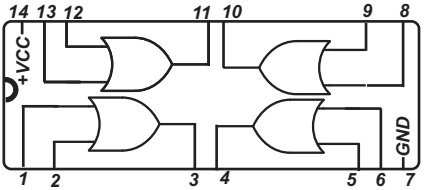
CD 4081 QAUD AND GATES



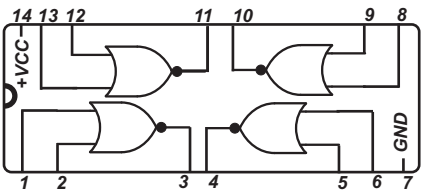
CD 4011 QUAD NAND GATES



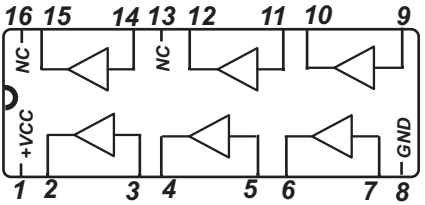
CD 4071 QAUD OR GATES



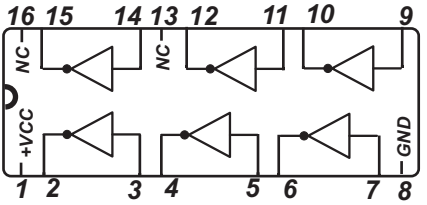
CD 4001 QAUD NOR GATES



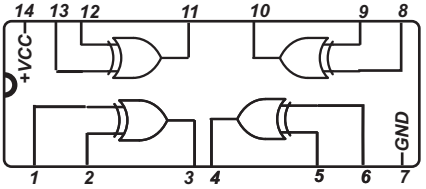
CD 4050 HEX BUFFERS



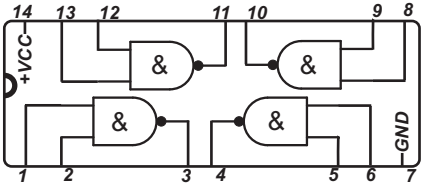
CD 4049 HEX INVERTORS



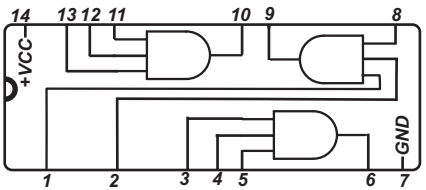
CD 4070 QUAD XOR GATES



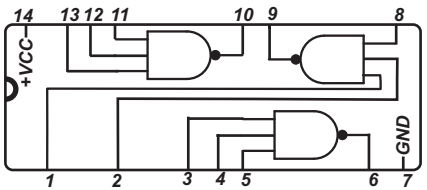
CD 4093 SCHITT NAND GATES



CD 4073 3 I/P AND GATES

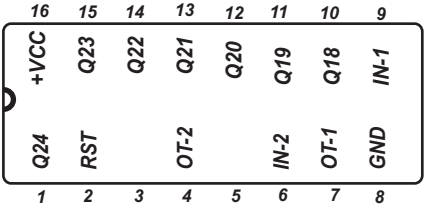


CD 4023 3 I/P NAND GATES



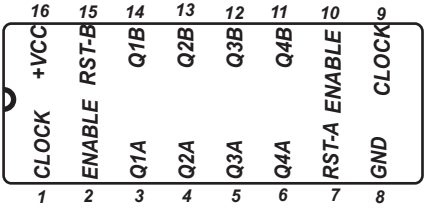
CMOS ICS

CD 4040 12 STAGE COUNTER

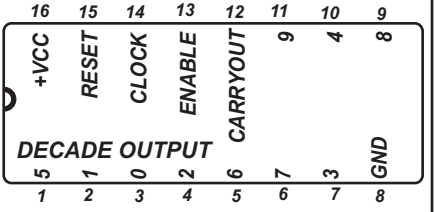


CD 4040 12 STAGE COUNTER

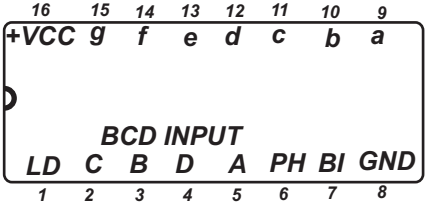
CD 4518 DUAL UP COUNTER



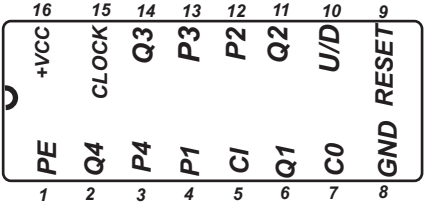
CD 4017 DECADE COUNTER



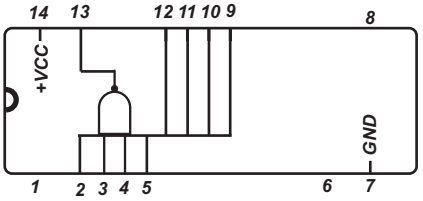
CD 4543 BCD TO 7SEGMENT DECODER



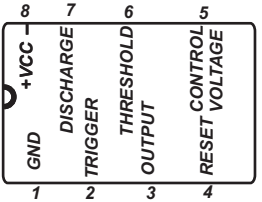
CD 4510 SYNCHRONOUS UP/DOWN COUNTER



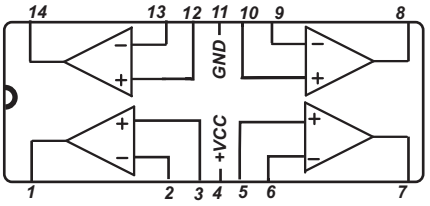
CD 4068 8 I/P NAND GATE



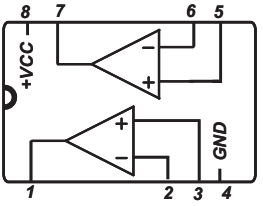
NE 555 TIMER



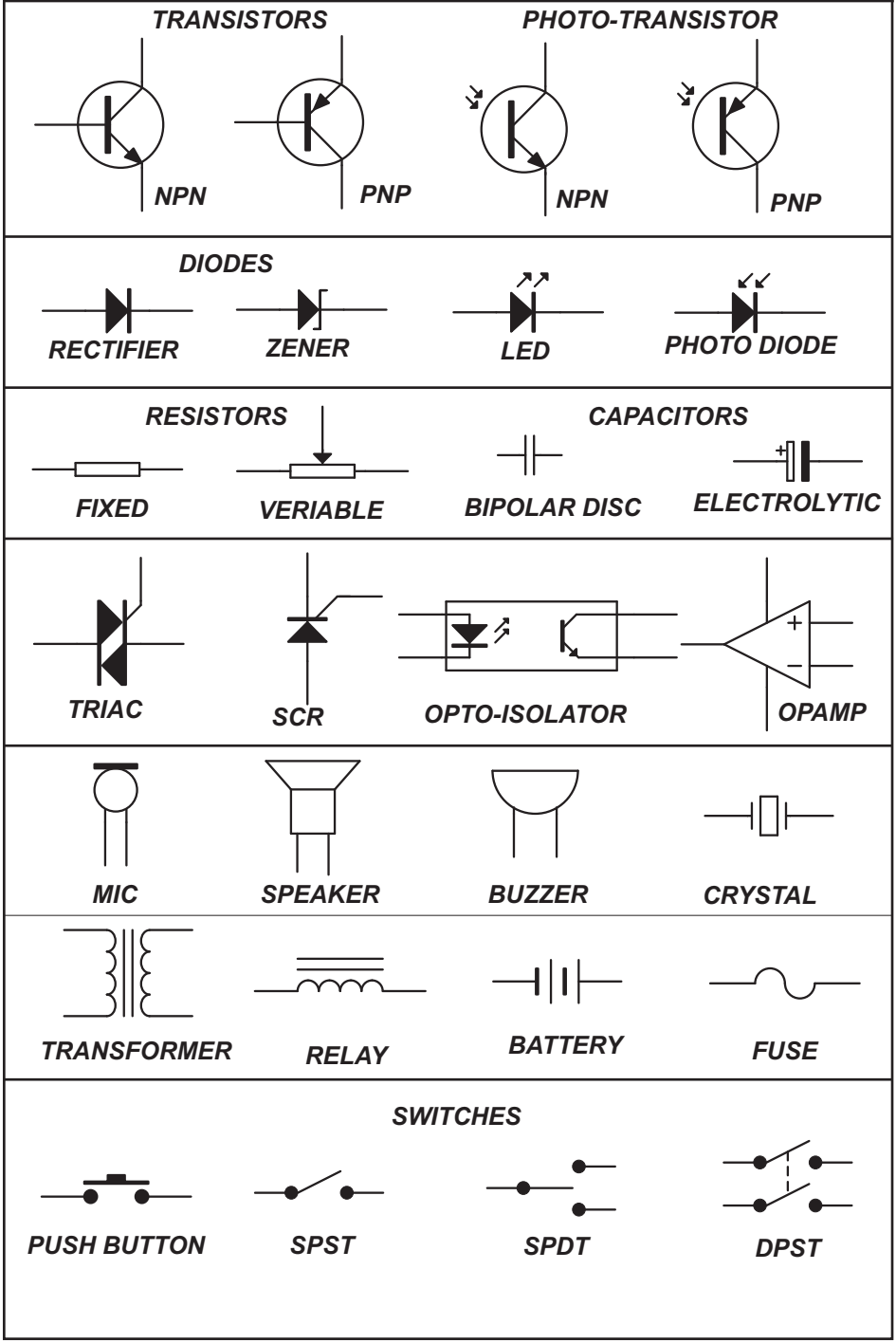
LM 324 QUAD OPAMP



LM 358 DUAL OPAMP



COMPONENT SYMBOLS



NOTES

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NOTES

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OUTLETS IN INDIA

PUNE

Pioneer Electronics

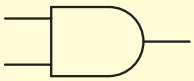
406,Budhwar Peth,
Vinayak Market,Near
Pasodya Vithoba Mandir,
PUNE-411002.
Ph.020-24454767/65029536
pioneer_tech@vsnl.net

INDORE

Bhaiya Electro-comp

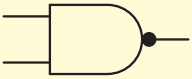
67(45)Ranipura Chouraya,
IInd floor, above Indore
Banduk Ghar,
INDORE-452007.
Ph. (0731)2431521
bhaiyaelectro67@gmail.com

LOGIC GATES-SYMBOLS & TRUTH TABLES



AND

A	B	O/P
0	0	0
0	1	0
1	0	0
1	1	1



NAND

A	B	O/P
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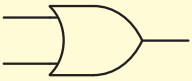
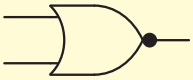
0	1	1
1	0	1
1	1	0



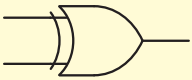
OR

A	B	O/P
0	0	0
0	1	1
1	0	1
1	1	1



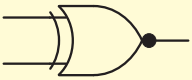
NOR

A	B	O/P
0	0	1
0	1	0
1	0	0
1	1	0



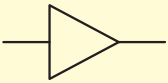
X-OR

A	B	O/P
0	0	0
0	1	1
1	0	1
1	1	0



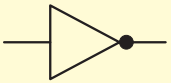
X-NOR

A	B	O/P
0	0	1
0	1	0
1	0	0
1	1	1



BUFFER

A	O/P
0	0
1	1



NOT

A	O/P
0	1
1	0

RESISTORS COLOUR CODE

Black	0	
Brown	1	
Red	2	
Orange	3	
Yellow	4	
Green	5	
Blue	6	
Violet	7	
Gray	8	
White	9	
Gold	5%	
Silver	10%	

CAPACITOR VALUES

102	1Kpf	0.001uf
103	10Kpf	0.01uf
104	100Kpf	0.1uf
222	2.2Kpf	0.0022uf
223	22Kpf	0.022uf
224	220Kpf	0.22uf
472	4.7Kpf	0.0047uf
473	47Kpf	0.047uf
474	470Kpf	0.470uf

Manufactured & marketed by:

MEGA-KIT™

PUNE-MAHARASHTRA-INDIA

Help line: 9225501142